Rapid Calprotectin Results with Quantum Blue®

Supports Clinical Decision Making

Rapid, Reliable Results
Although calprotectin testing has increased significantly many hospitals still batch samples for weekly testing or to send away to a referral laboratory for analysis. This means it can take several weeks before a result is available. Treatment decisions therefore often have to be made without the benefit of the calprotectin result or other more invasive and costly investigations are thus performed to determine the level of mucosal inflammation is present.

Faecal calprotectin concentrations are widely acknowledged to correlate to the degree of mucosal inflammation in the gut. However, the result is often not available at the point of decision making.

A recent study by Dr Derwa et al1 from the University Hospital in Leeds regarding the factors effecting clinical decision making in IBD found that:

“Almost 60% of patients that were referred for investigation had no evidence of mucosal inflammation.”

The study went on to conclude that:

“Introduction of routine point-of-care faecal calprotectin testing could, potentially, improve the appropriateness of clinical decision-making, streamline resource allocation, reduce adverse events associated with injudicious use of medications and reduce costs.”

The BÜHLMANN Quantum Blue® is a compact device that can be used in clinics or laboratories to give rapid quantitative faecal calprotectin results in a time frame to support clinical decision making.

The assays all give a quantitative result, and there are three test ranges to choose from:

- Standard range faecal calprotectin 30 - 300µg/g
- High range faecal calprotectin 100 – 1800µg/g
- Extended range faecal calprotectin 30 - 1000µg/g

Results are available within 12-15 minutes (depending on the assay)

**Timely**

Quantitative results are available in just 15 minutes using the simple desk top reading device that can easily be used in the clinic setting making the result available to support the clinical decision making process:

“This rapid bedside test can facilitate clinical decisions on hospital admission, such as deciding whether the IBD treatment should be intensified. Similarly, in the ambulatory setting, it is crucial when determining whether a patient should undergo endoscopy or not.”

The Quantum Blue testing method is also used in laboratories with low throughput. It prevents the need to use a referral testing laboratory or store samples for batch testing, enabling a much faster turn-around for results.
Accurate

Numerous studies have demonstrated the correlation of the result from BÜHLMANN calprotectin assays to the health of the gut and the clinical outcome.

“We observed that FC, measured both with fCAL ELISA and the rapid Quantum Blue, was able to discriminate between the different levels of endoscopic activity, as well as to detect the presence or absence of ulcers.”

“FC appeared to be the optimal marker for identification of endoscopic postoperative recurrence, with high sensitivity and NPV. FC measurement is sufficiently sensitive in the postoperative setting after resection of all macroscopic disease to monitor for CD recurrence.”

Simple

The BÜHLMANN Quantum Blue fCAL rapid tests combine the ease and speed of lateral flow technology with full quantification of the results by means of a small dedicated reading device.

The CALEX Cap is a stool extraction device that provides rapid, clean and consistent sample preparation every time.

1) Remove the CALEX Cap sampling pin
2) Dip into the sample 3 times
3) Put the cap back into CALEX device

The CALEX Cap can be given to patients instead of collection pots so that the calprotectin in the sample is stabilised immediately in the extraction buffer to prevent degradation before testing.

| Prepare the CALEX Cap extraction device as above | Transfer 60µl of extract to the circular loading port on the cassette | A timer on the Quantum Blue reader controls the incubation time and starts the reading process automatically | The test result is displayed in µg/g. The reader is ready for the next sample |
Standardised

Start your calprotectin journey today with BÜHLMANN assays, confident in the knowledge that your testing can evolve to support volume and technology changes. BÜHLMANN has specialised in calprotectin assays for more than 10 years and has the broadest range of faecal calprotectin assays available. All are quantitative, scalable and flexible, allowing hospitals to evolve their calprotectin service in line with changing demands.

BÜHLMANN assays are standardised across the range to give consistent results and cut-off values enabling testing in both POC and laboratory settings (see graph from Coorevits) and allowing for the smooth transition between assay technologies. The standardisation of the BÜHLMANN assays has remained unchanged for the last 10 years – it is this consistency, combined with the quality and flexibility of the products that makes BÜHLMANN such a trusted partner for calprotectin assays.

Reliable

The BÜHLMANN Quantum Blue® faecal calprotectin assays are individually packaged to ensure the quality of the test is maintained until it is required. This means no batching of samples is necessary. If you want to do a single test then you can – the other test cassettes remain sealed until you are ready to use them.

Flexible

The Quantum Blue reader can be used with a number of different assays to give quantitative results in a time frame that can impact the clinical decision.

<table>
<thead>
<tr>
<th>Description</th>
<th>Assay Range</th>
<th>Code</th>
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<tbody>
<tr>
<td>Faecal Calprotectin Standard Range</td>
<td>30-300µg/g</td>
<td>LF-CAL25</td>
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<tr>
<td>Faecal Calprotectin High Range</td>
<td>100-1800µg/g</td>
<td>LF-CHR25</td>
</tr>
<tr>
<td>Faecal Calprotectin Extended Range</td>
<td>30-1000µg/g</td>
<td>LF-CALE25</td>
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<tr>
<td>Serum Calprotectin</td>
<td>0.42-10µg/ml</td>
<td>LF-MRP25</td>
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<tr>
<td>Ascites Calprotectin</td>
<td>0.19-1.9µg/ml</td>
<td>LF-ASC25</td>
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<tr>
<td>CRP</td>
<td>1-25mg/l</td>
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<tr>
<td>Infliximab Serum Trough levels</td>
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<td>LF-TLIF25</td>
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<tr>
<td>Adalimumab Serum Trough levels</td>
<td>1-35µg/ml</td>
<td>LF-TLAD25</td>
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References:

1. Derwa et al Therapeutic Advances in Gastroenterology 2018.
   Rapid fecal calprotectin test for prediction of mucosal inflammation in ulcerative colitis and Crohn disease: a prospective cohort study.
   Comparison of Fecal Inflammatory Markers in Crohn’s Disease

Future-proof your Calprotectin Testing with BÜHLMANN:
IBDoc®, Quantum Blue®, fCAL ELISA and fCAL turbo

alpha laboratories
 supplying quality to science

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